

What is claimed is:

1. A sound collecting device comprising:
a transducer responsive to input of a sound wave to vibrate,
5 producing a corresponding acoustic signal;
an amplifier amplifying the acoustic signal from said
transducer; and
a vibrating circuit connected to said transducer in parallel to
said amplifier to vibrate said transducer.
10
2. A sound collecting device as set forth in claim 1, further
comprising a switch which selectively establishes and blocks
communications between said transducer and said amplifier and
between said transducer and said vibrating circuit.
15
3. A sound collecting device as set forth in claim 1, further
comprising a controller which controls an operation of said vibrating
circuit.
- 20 4. A sound collecting device as set forth in claim 2, further
comprising a controller which controls a switching operation of said
switch.
5. A sound collecting device as set forth in claim 3, further
25 comprising a temperature sensor which measures an ambient
temperature, and wherein said controller controls said vibrating

circuit to vibrate said transducer at a shorter time interval when the ambient temperature measured by the temperature sensor is lower than a given value and at a longer time interval when the ambient temperature is higher than a given value.

5

~~6.~~ A sound collecting device comprising:

a transducer responsive to input of a sound wave to vibrate,
producing a corresponding acoustic signal;

an amplifier amplifying the acoustic signal from said
10 transducer;

an electromagnetic sensor responsive to input of an
electromagnetic wave to produce a corresponding electromagnetic
signal; and

an output circuit subtracting the electromagnetic signal
15 produced by said electromagnetic sensor from an output from said
amplifier to produce an acoustic signal from which an
electromagnetic wave-caused noise is removed.

7. A sound collecting device as set forth in claim 6, further
20 comprising a housing, a sound collecting unit disposed within said
housing, and a sensor amplifier amplifying the electromagnetic
signal outputted from said electromagnetic sensor, and wherein said
transducer is installed in said sound collecting unit, and said
electromagnetic sensor is installed in said housing adjacent said
25 sound collecting unit.

8. A sound collecting device as set forth in claim 7, further comprising an opening formed in said housing for allowing the electromagnetic wave to enter said electromagnetic sensor from the same direction as that in which the sound wave enters said
5 transducer.

9. A sound collecting device as set forth in claim 7, further comprising a first and a second peak hold circuit, the first peak hold circuit holding a peak of the output from said amplifier to provide a
10 corresponding signal to said output circuit, the second peak hold circuit holding a peak of an output from said sensor amplifier to provide a corresponding signal to said output circuit.

10. A sound collecting device as set forth in claim 7, further
15 comprising a transducer vibrating circuit connected to said transducer in parallel to said amplifier to vibrate said transducer and a sensor vibrating circuit connected to said electromagnetic sensor in parallel to said sensor amplifier to vibrate said
electromagnetic sensor.

20

11. A sound collecting device as set forth in claim 10, further comprising a first and a second switch, the first switch selectively establishing and blocking communications between said transducer and said amplifier and between said transducer and said transducer
25 vibrating circuit, the second switch selectively establishing and blocking communications between said electromagnetic sensor and

said sensor amplifier and between said electromagnetic sensor and
said sensor vibrating circuit.

12. A sound collecting device as set forth in claim 10, further
5 comprising a controller which controls an operation of said
transducer vibrating circuit.

13. A sound collecting device as set forth in claim 11, further
comprising a controller which controls switching operations of said
10 first and second switches.

20250001-2792140